UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/864,107	05/24/2001	Filips Van Liere	NL 000278	1459

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EXAMINER
WANG, JIN CHENG

ART UNIT	PAPER NUMBER
2672	

DATE MAILED: 11/01/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/864,107	VAN LIERE, FILIPS
	Examiner	Art Unit	
	Jin-Cheng Wang	2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>7/6/2005 and 8/15/2005</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-3,5-12 and 14-19</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-3,5-12 and 14-19</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

A request for continued examination under 37 CFR 1.114, including the fee set forth in

37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e)

has been timely paid, the finality of the previous Office action has been withdrawn pursuant to

37 CFR 1.114. Applicant's submission filed on 7/6/2005 and 8/15/2005 have been entered.

Claims 1, 9-12, and 14-18 have been amended. Claims 4, 13 and 20-24 have been canceled.

Claims 1-3, 5-12, 14-19 are pending in the application.

Response to Arguments

Applicant's arguments with respect to claims 1-3, 5-12, 14-19 have been considered but

are moot in view of the new ground(s) of rejection based on Echerer et al. U.S. Pat. No.

5,740,267 (hereinafter Echerer) in view of Fenster et al. U.S. Pat. No. 6,461,298 (hereinafter

Fenster) and Buxton et al. U.S. Patent No. 5,798,752 (hereinafter Buxton). As set forth in the

subsequent rejection, the Echerer, Fenster and Buxton combination teaches the claim limitations

of the amended claim 1 and similar claims.

For example, Fenster teaches the claim limitation of "enabling the generation of the

plurality of different measurement graphics based only upon actuation of said at least one button

of said mouse when said pointer symbol is situated on said medical image without actuation of

said at least one button of said mouse when said pointer symbol is situated on menus, toolbars

and control panels such that the measurement graphics are generated without movement of said

pointer symbol outside of said medical image." This is because Fenster discloses in column 19

and 4 that the user can use the graphical input device 38 such as a single button mouse to

measure distances and areas of the three-dimensional image within the most recently moved

image plane and the user simply needs to use the graphical input device 38 to indicate the two

end points over which the distance is to be measured if the user wishes to measure a distance and

the user must identify at least three points if an area is to be measured and the placement of

points on the image is done by moving a cursor and the display module 92 connects adjacent

points by straight line segments and computes both the overall line length and the area bounded

by the lines joining the points using an appropriate scale. **In this setting, only a mouse has been**

placed on the points of the image to measure a distance or an area without activation of

menus, toolbars and control panels outside the medical image.

When the pointer symbol is situated on the medical image, a measurement graphics is

generated without actuation of one button of the mouse on menus, toolbars and control panels

because the pointer symbol is situated on the medical image while the measurement graphics is

generated. The pointer symbol is not situated on menus, toolbars and control panels when the

pointer symbol is situated on the medical image. Therefore, the actuation of the at least one

button of the mouse enables the generation of the plurality of different measurement graphics

including measuring the distance of two points on the medical image and the area encircled by

three points on the medical image without actuating at least a button of the mouse when the

pointer symbol of the mouse is situated on menus, toolbars and control panels, i.e., when the

pointer symbol is subsequently moved away from the medical image after the generation of the

measurement graphics. Fenster discloses enabling the generation of the plurality of different

measurement graphics including the measurement of distance between two points on the medical image and the measurement of area encircled by more than two points on the medical image based only upon actuation of at least one button of said mouse when said pointer symbol is situated on said medical image without clicking on the mouse, even when the pointer symbol is moved outside the medical image and placed on the menus, toolbars, and control panels outside the medical image after the measurement graphics is generated. Fenster discloses enabling the generation of the plurality of different measurement graphics including the measurement of distance between two points on the medical image and the measurement of area encircled by more than two points on the medical image based only upon actuation of at least one button of said mouse when said pointer symbol is situated on said medical image without the actuation of the at least one button of the mouse when said pointer symbol is subsequently moved away from the medical image and placed on menus, toolbars, and control panels. Because the pointer symbol is placed on the medical image in the generation of the measurement graphics, the measurement graphics are generated without the movement of the pointer symbol outside of the medical image while the measurement graphics is generated. In conclusion, Fenster discloses the claim limitation of enabling the generation of the plurality of different measurement graphics based only upon actuation of said at least one button of said mouse when said pointer symbol is situated on said medical image without actuation of said at least one button of said mouse when said pointer symbol is situated on menus, toolbars, and control panels such that the measurement graphics are generated without movement of said pointer symbol outside of said medical image.

According to MPEP 2106, Office personnel are to give claims their broadest reasonable interpretation in light of the supporting disclosure. *In re Morris, 127 F.3d 1048, 1054-55,*

44 USPQ2d 1023, 1027-28 (Fed. Cir. 1997). Limitations appearing in the specification but not

recited in the claim are not read into the claim. *E-Pass Techs., Inc. v. 3Com Corp., 343 F.3d*

1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) (claims must be interpreted 'in view of the

specification' without importing limitations from the specification into the claims

unnecessarily).*In re Prater, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-551 (CCPA 1969).*

See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989).

It would have been obvious to one of ordinary skill in the art to have incorporated the

Fenster's measurement method into Echerer's method of processing cursored user interaction

because Echerer implicitly suggests providing a menu-less graphical interface for display said

medical image (e.g., Echerer column 12, lines 20-30; column 13, lines 25-50) and providing a

predefined interaction with said medical image, wherein said interaction is selected from a group

of predefined interactions based on said status of each of said at least one button during the

interval between multiple said position detection steps (e.g., Echerer column 16, lines 15-67;

column 17, lines 1-67; column 18, lines 1-64) therefore suggesting an obvious modification of

the Echerer's method for processing a radiograph. One having the ordinary skill in the art would

have been motivated to do this because it would have provided an alternative drawing option that

does not rely on the menus, control panels and toolbars for GUI control (Fenster column 4 and

19).

However, Echerer and Fenster do not expressly disclose the claim limitation of "triple-

point actuating/positioning" within the claim limitation of "enabling the generation of the

measurement graphics without requiring a user to define a type of graphic being generated,

wherein one of the measurement graphics is an angle value quantity which is assigned to a

middle point of a tripe-point actuating/positioning".

Buxton discloses the claim limitation of "triple-point actuation/positioning" (Buxton

column 19, lines 55-67). Buxton discloses measuring the lengths, slopes and coordinates and

slopes using the button tool and measuring the angle of the tripe points clicked wherein the angle

is related to the middle point of the last three point clicked (See Buxton column 19, lines 55-67).

It would have been obvious to have incorporated Buxton's triple-point

actuation/positioning into Echerer and Fenster's method because Echerer suggests the claim

limitation by disclosing measuring the angle between two lines formed by four points wherein

the four points are specified as in column 21 for measuring the angle. The example shows that

the four points may be distinct from each other. However, one of the ordinary recognizes that the

four points may include two identical points resulting in a three distinct points that is the same as

what being claimed, i.e., the three point actuating/positioning by the user through an automatic

analysis file specification of the three points for measuring an angle of the two rays formed by

the three points or four points with two identical points. Therefore, Echerer suggests the claim

limitation of "triple-point actuation/positioning".

Moreover, Echerer discloses enabling the generation of the measurement graphics

without requiring a user to define a type of graphic being generated or without requiring a user

specifying the type of graphic being generated using the menus through the automatic analysis

file wherein the measurement graphics is automatically generated (See column 17-18).

Therefore, having the combined teaching of Echerer, Fenster and Buxton, one of the

ordinary skill in the art would have been motivated to measure the angle associated with three

points as clicked by the user using the mouse because this allows the use of a click-through

button tool that measures geometric properties (Buxton column 19, lines 55-67).

Claim Rejections - 35 USC § 103

1.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2.   Claims 1-3, 5-12, 14-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Echerer et al. U.S. Pat. No. 5,740,267 (hereinafter Echerer) in view of Fenster et al. U.S. Pat. No.

6,461,298 (hereinafter Fenster) and Buxton et al. U.S. Patent No. 5,798,752 (hereinafter Buxton).

3.   Re Claim 1:

(a) Echerer teaches a method for providing and processing a cursored user interaction

(column 8, lines 37-67, column 9, lines 1-23) with a spatially displayed medical image (column

7, lines 21-29) and producing graphics related data on said medical image (column 12, lines 42-

56), wherein said method comprises the steps of:

Controlling a mouse computer interface device, having at least one button (e.g., column

12, lines 20-30; column 13, lines 25-50);

Displaying a pointer symbol on said graphical interface, wherein said pointer symbol

(e.g., a cursor) represents a current position of said mouse on said graphical interface (e.g.,

column 8, lines 35-55; column 12, lines 20-30; column 13, lines 25-50);

Tracking a status of each of said at least one button (e.g., column 12, lines 20-30; column

13, lines 25-50);

Detecting a position of said mouse, wherein said position detection step is activated upon

actuation of one of said at least one button (e.g., column 12, lines 20-30; column 13, lines 25-50;

column 15, lines 15-35); and

Generating one of a plurality of measurement graphics related to a predefined set of

measurement operations on said medical image upon at least one actuation of said at least one

button (*herein only mouse is being used instead of the user interface constructs such as ACTION*

BARS or SCROLLABLE PANEL AREAS; see e.g., column 12, lines 20-30; column 13, lines 25-

50; column 15, lines 15-35).

Enabling the generation of the plurality of different measurement graphics using said

mouse without activation of toolbars and control panels (e.g., column 12, lines 20-30; column

13, lines 25-50; column 15, lines 15-35).

In other words, Echerer further discloses enabling the generation of the measurement

graphics without without activation of ACTION BARS or image fields, OR CONTROL PANELS

since Echerer teaches using a mouse only without activating ACTION BARS or image fields, OR

CONTROL PANELS (See e.g., column 12, lines 20-30; column 13, lines 25-50; column 15, lines

15-35).

(b) However Echerer is silent to "Enabling the generation of the plurality of different measurement graphics using only said mouse without activation of menus, toolbars and control panels" and "providing a menu-less graphical interface for displaying, essentially unobstructed, said medical image in a substantial portion of said graphical interface."

(c) Fenster teaches the claim limitation of "enabling the generation of the plurality of different measurement graphics using only said mouse without activation of menus, toolbars and control panels" and "providing a menu-less graphical interface for displaying, essentially unobstructed, said medical image in a substantial portion of said graphical interface" (*This is because Fenster discloses in column 19 and 4 that the user can use the graphical input device 38 such as a single button mouse to measure distances and areas of the three-dimensional image within the most recently moved image plane and the user simply needs to use the graphical input device 38 to indicate the two end points over which the distance is to be measured if the user wishes to measure a distance and the user must identify at least three points if an area is to be measured and the placement of points on the image is done by moving a cursor and the display module 92 connects adjacent points by straight line segments and computes both the overall line length and the area bounded by the lines joining the points using an appropriate scale. **In this setting, only a mouse has been placed on the points of the image to measure a distance or an area without activation of menus, toolbars and control panels outside the medical image. Fenster also teaches similar claim limitations set forth in the claims 23-24**).

When the pointer symbol is situated on the medical image, a measurement graphics is generated without actuation of one button of the mouse on menus, toolbars and control panels because the pointer symbol is situated on the medical image while the measurement graphics is

generated. The pointer symbol is not situated on menus, toolbars and control panels when the

pointer symbol is situated on the medical image. Therefore, the actuation of the at least one

button of the mouse enables the generation of the plurality of different measurement graphics

including measuring the distance of two points on the medical image and the area encircled by

three points on the medical image without actuating at least a button of the mouse when the

pointer symbol of the mouse is situated on menus, toolbars and control panels, i.e., when the

pointer symbol is subsequently moved away from the medical image after the generation of the

measurement graphics. Fenster discloses enabling the generation of the plurality of different

measurement graphics including the measurement of distance between two points on the medical

image and the measurement of area encircled by more than two points on the medical image

based only upon actuation of at least one button of said mouse when said pointer symbol is

situated on said medical image without clicking on the mouse, even when the pointer symbol is

moved outside the medical image and placed on the menus, toolbars, and control panels outside

the medical image after the measurement graphics is generated. Fenster discloses enabling the

generation of the plurality of different measurement graphics including the measurement of

distance between two points on the medical image and the measurement of area encircled by

more than two points on the medical image based only upon actuation of at least one button of

said mouse when said pointer symbol is situated on said medical image without the actuation of

the at least one button of the mouse when said pointer symbol is subsequently moved away from

the medical image and placed on menus, toolbars, and control panels. Because the pointer

symbol is placed on the medical image in the generation of the measurement graphics, the

measurement graphics are generated without the movement of the pointer symbol outside of the

medical image while the measurement graphics is generated. In conclusion, Fenster discloses the

claim limitation of enabling the generation of the plurality of different measurement graphics

based only upon actuation of said at least one button of said mouse when said pointer symbol is

situated on said medical image without actuation of said at least one button of said mouse when

said pointer symbol is situated on menus, toolbars, and control panels such that the measurement

graphics are generated without movement of said pointer symbol outside of said medical image.

(d) It would have been obvious to one of ordinary skill in the art to have incorporated the

Fenster's measurement method into Echerer's method of processing cursored user interaction

because Echerer implicitly suggests providing a menu-less graphical interface for display said

medical image (e.g., Echerer column 12, lines 20-30; column 13, lines 25-50) and providing a

predefined interaction with said medical image, wherein said interaction is selected from a group

of predefined interactions based on said status of each of said at least one button during the

interval between multiple said position detection steps (e.g., Echerer column 16, lines 15-67;

column 17, lines 1-67; column 18, lines 1-64) therefore suggesting an obvious modification of

the Echerer's method for processing a radiograph.

(e) One having the ordinary skill in the art would have been motivated to do this because

it would have provided an alternative drawing option that does not rely on the menus, control

panels and toolbars for GUI control (Fenster column 4 and 19).

However, Echerer and Fenster do not expressly disclose the claim limitation of "triple-

point actuating/positioning" within the claim limitation of "enabling the generation of the

measurement graphics without requiring a user to define a type of graphic being generated,

wherein one of the measurement graphics is an angle value quantity which is assigned to a

middle point of a tripe-point actuating/positioning".

Buxton discloses the claim limitation of "triple-point actuation/positioning" (Buxton

column 19, lines 55-67). Buxton discloses measuring the lengths, slopes and coordinates and

slopes using the button tool and measuring the angle of the tripe points clicked wherein the angle

is related to the middle point of the last three point clicked (See Buxton column 19, lines 55-67).

It would have been obvious to have incorporated Buxton's triple-point

actuation/positioning into Echerer and Fenster's method because Echerer suggests the claim

limitation by disclosing measuring the angle between two lines formed by four points wherein

the four points are specified as in column 21 for measuring the angle. The example shows that

the four points may be distinct from each other. However, one of the ordinary recognizes that the

four points may include two identical points resulting in a three distinct points that is the same as

what being claimed, i.e., the three point actuating/positioning by the user through an automatic

analysis file specification of the three points for measuring an angle of the two rays formed by

the three points or four points with two identical points. Therefore, Echerer suggests the claim

limitation of "triple-point actuation/positioning".

Moreover, Echerer discloses enabling the generation of the measurement graphics

without requiring a user to define a type of graphic being generated or without requiring a user

specifying the type of graphic being generated using the menus through the automatic analysis

file wherein the measurement graphics is automatically generated (See column 17-18).

Therefore, having the combined teaching of Echerer, Fenster and Buxton, one of the

ordinary skill in the art would have been motivated to measure the angle associated with three

points as clicked by the user using the mouse because this allows the use of a click-through

button tool that measures geometric properties (Buxton column 19, lines 55-67).

Claim 2:

The claim 2 encompasses the same scope of invention as that of claim 1 except additional

claimed limitation that a single-point actuating/positioning assigns an actual pixel position and/or

a pixel intensity quantity to the point in question. However, Echerer and Fenster further disclose

the claimed limitation that a single-point actuating/positioning assigns an actual pixel position

and/or a pixel intensity quantity to the point in question (e.g., Echerer column 12, lines 42-56;

Fenster column 19).

Claim 3:

The claim 3 encompasses the same scope of invention as that of claim 1 except additional

claimed limitation that a point pair actuating/positioning assigns a distance value to the pair in

question. However, Echerer further discloses the claimed limitation that a point pair

actuating/positioning assigns a distance value to the pair in question (e.g., column 13, lines 12-

49, column 15, lines 9-11).

4.   Claim 5:

The claim 5 encompasses the same scope of invention as that of claim 1 except additional

claimed limitation that "multiple-point actuating/positioning for an open or closed point

sequence assigns an area value quantity to a concave region delimited by the sequence in

question". However, Fenster further discloses the claim limitation of multiple-point

actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question (*This is because Fenster discloses in column 19 and 4 that the user can use the graphical input device 38 such as a single button mouse to measure distances and areas of the three-dimensional image within the most recently moved image plane and the user simply needs to use the graphical input device 38 to indicate the two end points over which the distance is to be measured if the user wishes to measure a distance and the user must identify at least three points if an area is to be measured and the placement of points on the image is done by moving a cursor and the display module 92 connects adjacent points by straight line segments and computes both the overall line length and the area bounded by the lines joining the points using an appropriate scale*).

5.   Claim 6:

The claim 6 encompasses the same scope of invention as that of claim 1 except additional claimed limitation that "a freehand-drawn actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question". However, Fenster further discloses the claim limitation of a freehand-drawn actuating/positioning for an open or closed point sequence assigns an area value quantity to a concave region delimited by the sequence in question (*This is because Fenster discloses in column 19 and 4 that the user can use the graphical input device 38 such as a single button mouse to measure distances and areas of the three-dimensional image within the most recently moved image plane and the user simply needs to use the graphical input device 38 to indicate the two end points over which the distance is to be measured if the user wishes to measure a distance*

and the user must identify at least three points if an area is to be measured and the placement of

points on the image is done by moving a cursor and the display module 92 connects adjacent

points by straight line segments and computes both the overall line length and the area bounded

by the lines joining the points using an appropriate scale).

6.   Claim 7:

        The claim 7 encompasses the same scope of invention as that of claim 1 except additional

claimed limitation of "a multiple-point actuating/positioning for an open or closed point

sequence assigns a poly-line measurement quantity to the sequence so drawn". However,

Fenster further discloses the claim limitation of a multiple-point actuating/positioning for an

open or closed point sequence assigns a poly-line measurement quantity to the sequence so

drawn (*This is because Fenster discloses in column 19 and 4 that the user can use the graphical*

input device 38 such as a single button mouse to measure distances and areas of the three-

dimensional image within the most recently moved image plane and the user simply needs to use

the graphical input device 38 to indicate the two end points over which the distance is to be

measured if the user wishes to measure a distance and the user must identify at least three points

if an area is to be measured and the placement of points on the image is done by moving a cursor

and the display module 92 connects adjacent points by straight line segments and computes both

the overall line length and the area bounded by the lines joining the points using an appropriate

scale).

7.   Claim 8:

The claim 8 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of "for an open or closed point sequence assigns a poly-line measurement quantity to the sequence so drawn". However, Fenster further discloses the claim limitation of a freehand-drawn actuating/positioning for an open or closed point sequence assigns a poly-line measurement quantity to the sequence so drawn (*This is because Fenster discloses in column 19 and 4 that the user can use the graphical input device 38 such as a single button mouse to measure distances and areas of the three-dimensional image within the most recently moved image plane and the user simply needs to use the graphical input device 38 to indicate the two end points over which the distance is to be measured if the user wishes to measure a distance and the user must identify at least three points if an area is to be measured and the placement of points on the image is done by moving a cursor and the display module 92 connects adjacent points by straight line segments and computes both the overall line length and the area bounded by the lines joining the points using an appropriate scale*).

8.   Claim 9:

The claim 9 encompasses the same scope of invention as that of any of Claims 2, 3, 5, 6, 7 or 8except additional claimed limitation of assigning a pixel staticizing to an assigned geometrical entity. However, Echerer further discloses the claimed limitation of assigning a pixel staticizing to an assigned geometrical entity (column 9, lines 1-23, column 15, lines 9-11).

9.   Claims 10-12:

The claim 10, 11, 12 encompasses the same scope of invention as that of claim 1, 2, 3 respectively except additional claimed limitation of "an apparatus". However, Echerer further discloses the claimed limitation of "an apparatus" (column 5, lines 12-37).

10.   Claims 14-18:

The claim 14, 15, 16, 17, 18 encompasses the same scope of invention as that of claim 5, 6, 7, 8, 9 except additional claimed limitation of "an apparatus". However, Echerer further discloses the claimed limitation of "an apparatus" (column 5, lines 12-37).

Claim 19:

The claim 19 encompasses the same scope of invention as that of claim 1 except additional claimed limitation of a machine-readable computer program. However, Echerer further discloses the claimed limitation of "a machine-readable computer program (column 9, lines 30-36, figures 6-9).
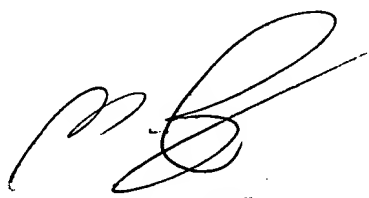
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jin-Cheng Wang whose telephone number is (571) 272-7665. The examiner can normally be reached on 8:00 - 6:30 (Mon-Thu).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Razavi can be reached on (571) 272-7664. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jcw

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